
 <p>Case Study</p>	<p align="center">Case Corporation</p> <p align="center">The Pollution Prevention Score</p>								
Standard Industrial Classification (SIC)	Agricultural and Construction Equipment/3523, 3531, 3568, 3321								
Type of Waste	Hazardous and non-hazardous industrial wastes								
Strategy	Management								
Company Background	<p>Founded in 1842 Case Corporation is headquartered in Racine. It operates three Wisconsin manufacturing facilities with approximately 17,000 employees worldwide. Case is now the second largest producer of agricultural equipment in North America and the world's largest manufacturer and distributor of light and medium-sized construction equipment. Case Corporation products are sold in approximately 150 countries through a network of approximately 4,100 independent dealers and distributors.</p>								
Original Process	The original method for measuring pollution generation was based solely on the volume of waste generated.								
Motivation	<p>Case has a very active pollution prevention program with a goal to reduce industrial waste generation by 50% by the end of 1995 (with 1992 as the baseline year). As part of its strategy, Case Corporation developed a pollution prevention measurement system to evaluate and sustain progress. This measurement system was developed in accordance with EPA guidelines, pollution prevention laws, and Case policy.</p>								
Pollution Prevention Process	<p>The POLLUTION PREVENTION SCORE is a risk-based measurement that measures and ranks the waste volume, waste toxicity, and waste management method using the following scoring factors: Waste Volume Score, Waste Management Score, and Pollution Prevention Score. Scores for each facility, and for the entire company, are calculated on a monthly basis and distributed to management and environmental coordinators. The system has been implemented at Case facilities worldwide.</p> <p>Waste Volume Score This score is calculated by dividing the industrial waste generated (pounds) by the product shipped (thousands of pounds). Case evaluated a number of variables, (standard direct labor hours, earned productivity hours, number of units produced, and pounds of product shipped), to account for external factors unrelated to pollution prevention that influenced the quantity generated.</p> <p>Waste Management Score This score is the actual waste generation divided by the adjusted waste generation. The score is based on a numeric ranking system modeled after EPA's pollution prevention hierarchy for waste management options. The highest risk is assigned a ranking of 6 and the lowest a ranking of 1.</p> <table border="1" data-bbox="527 1730 1416 1925"> <thead> <tr> <th>Rank</th><th>Waste and Management Method</th></tr> </thead> <tbody> <tr> <td>6</td><td>disposal of hazardous waste</td></tr> <tr> <td>5</td><td>treatment of hazardous waste</td></tr> <tr> <td></td><td></td></tr> </tbody> </table>	Rank	Waste and Management Method	6	disposal of hazardous waste	5	treatment of hazardous waste		
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Economics	Implementing this system did not require additional expenditures since it was incorporated into existing reporting and tracking systems. The score has proven useful for analyzing where pollution prevention efforts (and dollars) should be focused to bring the greatest improvement. This program provides a means to evaluate pollution prevention projects by running "what if" scenarios that help determine which projects give the most "bang for the buck." Projects implemented under this system have resulted in cost-savings.								
Benefits	This system provides a comprehensive risk-based measurement of pollution prevention by taking into account more of the factors associated with pollution generation. It provides a continuous indicator of progress; separate scores can be calculated to measure progress at different types of facilities.								
Obstacles	Calculating the scores requires significant data on: waste type and volumes; whether a waste is hazardous or non-hazardous; how each waste is managed at the off-site facility where it is shipped; and production (in this case, pounds of product shipped). This information is incorporated into an existing monthly reporting system that uses a computer spreadsheet to calculate the scores. Database software is being evaluated to better manage the data.								
Technology Transfer	The pollution prevention score is flexible and can be readily modified by other companies. The waste categories, rank factors, and production variables can all be changed or customized for use by other companies.								
Other Pollution Prevention Activities	Examples of projects that have been implemented in Wisconsin under the Case pollution prevention program and whose benefits are measured by the pollution prevention score include: the replacement of solvent cleaning of coreboxes with a CO ₂ pelletizer-blasting unit at the Racine foundry facility; and the elimination of a vapor degreaser containing 1,1,1-trichloroethane at the Racine transmission plant. Both of those processes are described in case studies (TS-032 and TS-033 respectively) available through the Pollution Prevention Clearinghouse.								
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Pollution Prevention Resources	<p>Free, On-site Technical Assistance University of Wisconsin Extension Solid and Hazardous Waste Education Center Milwaukee area: 414/475-2845 Remainder of state: 608/262-0385</p> <p>Pollution Prevention Information Clearinghouse Wisconsin Department of Natural Resources Cooperative Environmental Assistance 608/267-9700 or e-mail: cea@dnr.state.wi.us</p>
	<p>Bureau of Cooperative Environmental Assistance Wisconsin Department of Natural Resources P.O. Box 7921 Madison, WI 53707 608/267-9700</p> <p>PUBL-TS-031 95</p>

